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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,480	06/06/2001	Nikil Jayant	062004-1770	7949

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EXAMINER	
AN, SHAWN S	

ART UNIT	PAPER NUMBER
2613	17

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/875,480	JAYANT ET AL.	
	Examiner	Art Unit	
	Shawn S An	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *36-55* is/are allowed.

6)☒ Claim(s) *17-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. As per Applicant's instructions in Paper 16 as filed on 12/5/03, claims 17, 36-37, 41-42, 45-46, and 52-53 have been amended.

Response to Remarks

2. Applicant's arguments with respect to claims 17-35 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 17-19, 22-23, 26-28, and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monro et al (6,078,619) in view of Kuroda et al (4,591,909).

Regarding claims 17, 22-23, 26-27, 32, and 33, Monro et al discloses a system/method and computer readable medium (abs.) for communication of video information, comprising:

a first object oriented coder (Fig. 1) for dividing data into object and background macroblocks (34); and

means for assigning/allocating (42) a higher number of bits to the object macroblock than to the background macroblocks (col. 5, lines 30-37; col. 6, lines 7-11).

Furthermore, Monro et al discloses providing some level of error protection (Col. 6, lines 49-54), and error thresholds in rate buffering and the object separator module for limiting the effects of camera noise (col. 7, lines 20-22).

However, Monro et al does not specifically disclose a higher number of error control overhead bits to the object macroblocks than to the background macroblocks.

Kuroda et al teaches interframe coding apparatus for providing error control overhead bits to the picture macroblocks and the background macroblocks.

Therefore, it clearly would have been considered obvious to a person of ordinary skill in the relevant art employing system/method for communication of video data as taught by Monro et al to incorporate the conventionally well known concept of providing error control overhead bits to the picture macroblocks and the background macroblocks as taught by Kuroda et al so as to assign a higher number of error control overhead bits to the object macroblocks than to the background macroblocks, since Monro's object macroblocks have been assigned higher number of bits, thereby having greater chance of sustaining more errors than the lower bits assigned background macroblocks.

Regarding claims 18, 28, Monro et al discloses a first processor (34) and a memory (42).

Regarding claim 19, it is considered an obvious design choice to simply add an identical object coder (second) that allocates a higher number of bits to the object macroblock than to the background macroblocks.

5. Claims 20-21, 24-25, 29-31, and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monro et al and Kuroda et al as applied to claims 17, 22, 26, and 32 above, respectively, and further in view of Kato (6,415,055 B1).

Regarding claims 20, 24, 29, and 34, The combination of Monro et al and Kuroda et al fails to disclose a third object oriented coder that receives a location vector and at least one motion vector of an object macroblock in a previous frame, the location vector and the at least one motion vector of an object macroblock that is missing in a current frame, and replacing the object macroblock that is missing in the current frame with the object macroblock in the previous frame.

However, Kato teaches a location vector and at least one motion vector (Fig. 8, 6) of macroblock in a previous frame (7A), the location vector and the at least one

motion vector (Fig. 8, 6) of an macroblock that is missing in a current frame (7B), and replacing the macroblock that is missing in the current frame with the macroblock in the previous frame (col. 4, lines 44-63).

Therefore, it would have been obvious to a person of ordinary skill in the art employing a system/method for communication of video data as taught by Monro et al to incorporate the well known concept of locating motion vector of macroblock in a previous frame and locating motion vector of an macroblock that is missing in a current frame, and replacing the macroblock that is missing in the current frame with the macroblock in the previous frame as taught by Kato so that by adopting Kato's encoder (use it as a second/third object coder) for locating the motion vector of object macroblock in a previous frame, and locating the motion vector of an object macroblock that is missing in a current frame, and replacing the macroblock that is missing in the current frame with the macroblock in the previous frame in order to further improve the performance of the object oriented coder, thus enhancing more quality, and to allow more effective video messaging.

Regarding claims 21, 25, 30-31, and 35, Kato teaches a quantization factor (Fig. 8, 13) for receiving more location vectors and motion vectors.

Allowable Subject Matter

6. Claims 36-55 are allowed.

7. Claims 36-55 recite the novel features comprising a first object oriented coder that

divides data into object macroblocks and background macroblocks,

receives a location vector and at least one motion vector of an object macroblock in a previous frame, the location vector and the at least one motion vector corresponds to location of the object macroblock that is missing in the current frame, and replaces the object macroblock that is missing in the current frame with the object macroblock in the previous frame;

wherein the first object oriented coder assigns a quantization factor a value that provides for receiving more location vectors and motion vectors of an object macroblock.

The art of record fails to anticipate or make obvious the novel features as specified in claims 36-55.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

A) Astle (5,812,787), Video coding scheme with foreground/background separation.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn S An whose telephone number is 703-305-0099. The examiner can normally be reached on Flex hours (10).

SHAWN S. AN
PATENT EXAMINER

SSA
Primary Patent Examiner
2/22/04